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| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 09/986,107             | GULVIN ET AL.       |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Stephen W. Smoot       | 2813                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's amendment filed on 15 March 2006.
2. ☒ The allowed claim(s) is/are 18-22 and 24-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>03132006</u> .</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|---|--|

*Stephen W. Smoot*

Stephen W. Smoot  
 Patent Examiner  
 Art Unit 2813

### **DETAILED ACTION**

This Office action is in response to applicant's amendment filed on 15 March 2006.

#### ***Allowable Subject Matter***

1. Claims 18-22, 24-32 are allowed.
2. The following is an examiner's statement of reasons for allowance:
  - Claims 18-22, 24, 28-31 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a method of fabricating a membrane of a structural material for a micro-device that includes forming at least one cut in a first layer of structural material, forming a first layer of a sacrificial material over the first layer of structural material such that an interface is created between a first material and the sacrificial material at the at least one cut, forming a second layer of structural material over the first layer of sacrificial material, and forming the membrane by etching the sacrificial material to release the second layer of structural material;
  - Claims 25-27 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a method of fabricating a

Art Unit: 2813

membrane of a structural material for a micro-device that includes forming at least one cut in a first layer of structural material, forming a first layer of a sacrificial material over the first layer of structural material such that an interface is created between a first material and the sacrificial material at the at least one cut, forming a second layer of structural material over the first layer of sacrificial material, forming a second layer of sacrificial material over the second layer of structural material, forming a protective layer over the second layer of sacrificial material, releasing the second layer of structural material by etching the first and second layers of sacrificial material, and removing the protective layer after the releasing step; and

- Claim 32 is allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a method of fabricating a membrane of a structural material for a micro-device that includes forming at least one cut in a first layer of structural material, forming a first layer of a sacrificial material over the first layer of structural material such that an interface is created between a first material and the sacrificial material at the at least one cut, forming a second layer of structural material over the first layer of sacrificial material, and releasing the second layer of structural material by etching the sacrificial material, wherein the first material includes a layer of nitride and the sacrificial material includes a layer of oxide.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen W. Smoot whose telephone number is 571-272-1698. The examiner can normally be reached on M-F (8:00 am to 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).